

# Snails and Slugs

By Susan Jones

Snails and slugs, ubiquitous orchid pests, can inflict a great deal of damage to virtually every part of an orchid. They wait for the cover of night to wreak their havoc. Snails and slugs, left unchecked, can infest a collection and kill your orchids fairly quickly.

If you grow orchids outdoors or in a greenhouse, these pests are likely to be found in the vicinity of your growing area. Indoor growers may introduce them with a new plant, which can harbor snails, slugs or their eggs unseen in the growing medium.

Snails and slugs eat mostly flowers, roots and tender new growths, although, if those are unavailable, they will consume any plant part. Because they do their damage primarily under the cover of darkness, they can be difficult to detect and eradicate.

There are many different types of slugs and snails that will eat orchids; some of the more common are the orchid or bush snails (*Zonitoides arboreus*), the brown garden snail (*Helix aspersa*), the field slug (*Deroceras reticulatum*) and the marsh slug (*Deroceras laeve*).



Early in the morning, you may be able to still find a snail that has been eating your flowers.

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## Life Cycles

These creatures are hermaphroditic, so every individual has both male and female organs and is capable of laying eggs. The life cycle of the various slugs and snails that prey on orchids is generally about one year in the immature stage, and a second year as an adult. The immatures are smaller in size and lighter in color, but otherwise resemble adults in form. Adults lay up to 300 eggs in batches of 10 to 50 each. These eggs hatch in the spring in as little as 10 days during warmer weather, or up to 100 days in cooler temperatures. The average maturation period is about one month..

## Control

If the creatures themselves are not visible when the plant is inspected, telltale signs of their presence include their translucent shiny slime trail; holes with uneven brown edges eaten through the flower tissues; nibbled roots (thicker roots may have only small pock-mark-like holes eaten into them, while smaller, finer roots may be eaten clean through; tender new root tips are especially vulnerable); and new growths may be damaged or chewed down to a nub.

To control snails and slugs, baits are commonly available from garden-supply retailers. In addition, a number of low-tech, low-cost, and low- (or no) toxicity remedies have been developed. Whenever chemical controls are employed, check to see that the product has been approved for use on orchids, and carefully follow all instructions for the product's safe use. Also consider the health of any pets and your children.

**Metaldehyde** (bait or dust) Products containing metaldehyde are effective against snails and slugs, but highly toxic to mammals. If ingested, even small amounts of this chemical can cause severe nerve and kidney damage in humans, pets and wildlife.

**Sluggo, EscarGo and Worry Free** These snail and slug controls are organic baits in which the active ingredient is iron phosphate. They are safe to use around pets and wildlife. Once the baits are eaten, snails and slugs stop feeding and die within a few days. The baits are biodegradable, so whatever is not consumed will degrade into the soil over time.

**Copper Tape** This is purported to act as a barrier to slugs and snails, as it holds a small electrical charge that repels the critters. This method is most effective when the plants to be protected are located on a bench or in an area that can be cordoned off by the tape (checking first to be sure that none of these pests are already inside the protected area and will be trapped among your plants). The tape must be at least an inch wide, and can become dirty after a while, necessitating replacement. Its effectiveness is questionable; while some growers swear by it, others seem to swear at it.



Snails and slugs can cause damage orchid roots to the point where they stop growing. As with any chewing pest, they can spread disease.

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## **Diatomaceous Earth or Dry Ash**

In sufficient quantity, these materials create a barrier slugs and snails are unable to cross. They need to be placed in sufficient quantity to repel mollusks; a swath 3 inches wide and 1 inch high should be sufficient. Both lose their effectiveness when they become wet, and so may not be the best choice of repellents.

**Predators** Snakes, toads, birds, possums, turtles and frogs all enjoy a good slug or snail snack if they can get one. As such, they make great biological controls. Consult your local garden club, agricultural extension office, or search online to find predators native to your locale and ways of encouraging them to visit your growing area.

**Beer** A favorite of some humans as well as mollusks, beer attracts snails and slugs. Place one or more small containers (clean, empty cat food or tuna fish cans area ideal) filled with enough beer to drown a snail or slug in the growing area. Empty out the stale beer and deceased pests every few days as needed, and replace with fresh beer.

**Pet Food** Dampen dry dog or cat food and place an inverted foil pie tin over it, propping up the tin enough on one side that the critters can get underneath. Check the tin every morning, removing and destroying the accumulated snails and slugs.

**Handpicking** Crush, kill, destroy. Although time consuming and sometimes messy, this is still an effective (and satisfying) method of control. Go out regularly after dark with a flashlight, and pick off and destroy any slugs and snails found on the plants. Do not use salt directly on the critters; although this does kill them, it may also get into your plants and growing environment, causing unwanted damage. Better to drop the pests into a container of saltwater solution.

As no one method is likely to be completely successful in eradicating slugs and snails, rotating or combining different controls may be the best defense against these pests. Vigilance and diligence are the best way to keep your orchids pest free.

## **References**

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